DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
**ACTIVITY REPORT: On-site Inspection**

A526268691

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|---|---|---|
| **FACILITY:** General Motors LLC - Milford Proving Ground | | **SRN / ID:** A5262 |
| **LOCATION:** 3300 General Motors Rd., MILFORD | | **DISTRICT:** Warren |
| **CITY:** MILFORD | | **COUNTY:** OAKLAND |
| **CONTACT:** Corri Zilio , Environmental Engineer | | **ACTIVITY DATE:** 08/21/2023 |
| **STAFF:** Kerry Kelly | **COMPLIANCE STATUS:** Compliance | **SOURCE CLASS:** MAJOR |
| **SUBJECT:** FY 2023 Targeted Inspection | | |
| **RESOLVED COMPLAINTS:** | | |

On August 21, 2023, I (Kerry Kelly, EGLE-AQD) conducted a scheduled inspection of General Motors LLC - Milford Proving Ground (GM-MPG), located at 3300 General Motors Road in Milford, Michigan. The purpose of this inspection was to determine the facility's compliance with the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); the Air Pollution Control Rules; and the conditions of Renewable Operating Permit (ROP) MI-ROP-A5262-2021 and PTI No. 130-22.

I arrived on site around 8:05 am. I met with Corri Zilio and Brenda Korth and showed them my photo credentials. Corri, Brenda and I met in a conference room to discuss the equipment/processes I would like to see during the inspection. Corri and Brenda answered questions and provided a tour of the facility. In addition, Corri provided records during the inspection.

General Motors LLC - Milford Proving Ground is a motor vehicle research and testing facility located on the western border of Oakland County. Oakland County is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants. The facility is bordered to the east and south by rural residential properties. There are two lakes, Sloan and Pickett, along the north/northeast border of the property.

The ROP includes applicable requirements for four boilers, 33 emergency generator engines, 10 engine dynamometers, gasoline storage tanks, paint booths, soil remediation equipment, a thermal testing process, and other miscellaneous equipment/processes.

GM-MPG is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of carbon monoxide and nitrogen oxides exceeds 100 tons per year. The source is a synthetic minor opt-out for Hazardous Air Pollutants (HAP).

**COMPLIANCE EVALUATION**

**MI-ROP-A5262-2021**

**SOURCE-WIDE CONDITIONS**

The source-wide conditions cover all process equipment source-wide including equipment covered by other permits, grand -fathered equipment and exempt equipment. Individual and aggregate HAP emissions from GM-MPG are limited to 9.0 tons/year (tpy) and 22.5 tpy respectively. Corri provided monthly and 12-month rolling HAP emission calculations as required in S.C. VI.3.d-e for the 12-month periods ending June 2022 - June 2023 (S:\Air Quality Division\STAFF\Kerry Kelly\FY 2023 Inspections\A5262). Sources of HAP emissions included in the records are: combustion (boilers, generators, dynos), gas tank purging, remediation, deployment of air bags, storage tanks, drinking water treatment, antifreeze draining, and crushing vehicles.

The highest reported 12-month rolling individual HAP emissions was 5.6 tons of ethylene glycol during the 12-month period ending September 2022. The highest 12-month rolling aggregate HAP emissions were 6.9 tons reported for the 12-month rolling time periods ending September 2022 and October 2022.

HAP emission records provided for the inspection I conducted on 7/13/22 showed negative ethylene glycol emissions. The negative ethylene glycol emissions were the result of GM calculating the monthly amount of ethylene glycol throughput by subtracting the amount ethylene glycol sent off as waste from the amount entering the facility monthly (sum of the amount of ethylene glycol in the vehicles coming in and the amount of ethylene glycol purchased each month). Some months GM-MPG over reported the amount of ethylene glycol use because they did not count the amount of waste generated in a month if it is not sent during that month. Months when waste was sent off sometimes resulted in negative ethylene glycol throughput because the waste was generated over more than one month. A notice of violation was issued on 9/19/2022 for Source-Wide SC 3.d. which requires records of the individual and aggregate HAP emission calculations using a mass balance approach and emission factors as approved by the AQD District Supervisor for determining the monthly emission rate in tons per calendar month be kept. On May 3, 2023, I received a written request, via email, from GM-MPG to

calculate 12-month rolling ethylene glycol emissions using the procedures specified in the email dated May 3, 2023 and it's attachment. This request was submitted pursuant to MI-ROP-A5262-2021, Source-Wide, Special Condition VI.1. On May 8, 2023, the AQD Warren District Supervisor sent an email approving GM's request to calculate 12-month rolling ethylene glycol emissions for DRAINING VEHICLE AND CRUSHING VEHICLES using the procedures specified in the email dated May 3, 2023 and it's attachment. Ethylene glycol emissions were calculated using the procedures in the May 3, 2023 email and attachment in the records provided for this inspection (8/21/23). The violation cited on 9/19/2022 is considered resolved as a result.

The Source-Wide natural gas usage is limited to 1500 billion BTU per year based on a 12-month rolling time period as determined at the end of each calendar month per SC II.1. Corri provided records of natural gas usage, in standard cubic feet and BTU heat input, on a 12-month rolling time period basis, as determined at the end of each calendar month for Source-Wide equipment, as required in SC VI.2, for June 2022 through June 2023 (Attachment 2). According to these records, the highest natural gas usage per 12-month rolling time period was approximately 484 billion BTU for December 2022. This is below the facility natural gas usage limit of 1500 billion BTU per 12 month rolling time period in Source-Wide SC II.1.

**EU-BOILER5, EU-BOILER6, and FG-BOILERS – Powerhouse (Building #9)**
The boilers at GM-MPG are used for heating, humidification, and testing. I inspected each of the boilers in FG-BOILERS, located in Building #9, during the inspection and noted the following:

Each boiler is equipped with a natural gas meter. EU-BOILER3 and EU-BOILER6 were the only boilers being operated at the time of the inspection.

EU-BOILER3 nameplate/labels state it is a Babcock FMD 1256 boiler, built in 1965, with a rating of 50,000 lbs of steam/hour. This information is consistent with the description in the ROP. I did not see a heat input rating on the boiler. The ROP description lists the heat input as 70 MMBTU/hour.

EU-BOILER4 nameplate/labels states it is a Keeler/Dorr boiler, built in 1988, with a rating of 40,000 lbs of steam/hour. The build year listed on the boiler (1988) is 23 years later than the install date listed in the description in the ROP (1965). I did not see a heat input rating on the boiler. The ROP description lists the heat input as 70 MMBTU/hour.

EU-BOILER5 and EU-BOILER6 nameplates/labels each state they are Nebraska Boilers, manufactured in 1980, with a steam rating of 40,000 btu/hour and surface area of 3664 square feet. The ROP description states the install date is April 1, 1993 for EU-BOILER5 and September 20, 1995 for EU-BOILER6 .

A powerhouse employee, Corey, that I spoke with during the inspection stated the EU-BOILER4, EU-BOILER5 and EU-BOILER6 were installed during or after 1988. Historical photos on an Oakland County website (Picturing Oakland County Through Time (arcgis.com) indicate the building housing EU-BOILER4, EU-BOILER5 and EU-BOILER6 was constructed between 1980 and 1990.

**EU-BOILER5 and EU-BOILER6**
The EU-BOILER5 and EU-BOILER6 tables in MI-ROP-A5262-2021 contain federally enforceable conditions established pursuant to Rule 201(1)(a).

NOx emissions from EU-BOILER5 and EU-BOILER6 are limited to 7.6 lb/hour based on a monthly average and 33.1 tpy based on a 12-month rolling time period in EU-BOILER5 & EU-BOILER6 SC I.1 and I.2. Corri provided records of the hourly and 12-month rolling NOx emissions from each of these boilers, required in EU-BOILER5 SC VI.2 and 3 and EU-BOILER6 SC VI.3 and 4 (Attachment 3).

EU-BOILER5 SC VI.3 and EU-BOILER6 SC VI.4 require the hourly NOx emissions be calculated in accordance with Appendix 7a. Appendix 7a specifies a NOx emission factor of 100 lbs NOx/MMscf of natural gas, Source: MAERS EF for SCC 1-03-006-02. The records provided indicate GM-MPG is using an emission factor of 100 lb NOx/MMscf of natural gas for EU-BOILER5 and 50 lb/MMcf for EU-BOILER6. According to AP-42, the 100 lb/MMscf NOx emission factor is the emission factor for uncontrolled boilers less than 100 MMBtu/hour heat input and the 50 lb/MMscf NOx emission factor is for boilers less than 100 MMBtu/hour equipped with low NOx burners. Corey showed me a metal placard on EU-BOILER6 that states COEN Low NOx. The highest hourly NOx emission rates, according to the records provided, were 2.1 lb/hour in January 2023 and June 2023 for EU-BOILER5 and 0.7 lb/hour in several months in 2022 and 2023 for EU-BOILER6, which are within permit limits.

The 12-month rolling NOx emissions records Corri provided indicate the highest 12-month rolling NOx emissions were 4.5 tons reported in the 12-month period ending June 2023 for EU-BOILER5 and 2.0 tons for the 12-month period ending June 2022 for EU-BOILER6, which are within permit limits.

GM-MPG is prohibited from burning any fuels other than sweet natural gas in EU-BOILER5 and EU-BOILER6 per FG-BOILER5 and EU-BOILER6 SC II.1. During the inspection, I only saw natural gas fuel lines for EU-BOILER5 and EU-BOILER6. In addition, the records provided indicate only natural gas is burned in EU-BOILER5 and EU-BOILER6.

Per FG-BOILER5 SC III.1, GM-MPG is required to operate and maintain EU-BOILER5 in a manner consistent with safety and good air pollution control practices for minimizing emissions. Corri provided records of preventative maintenance performed on EU-BOILER5 and EU-BOILER6 as required in EU-BOILER5 SC VI.4 and EU-BOILER6 SC VI.5.

EU-BOILER5 and EU-BOILER6 SC VIII.1 required exhaust gases from each boiler be discharged unobstructed vertically upwards to the ambient air through a stack with a maximum diameter of 60 inches and minimum height of 150 feet. I observed a brick stack near Building #9 that appeared to be about four times the building height. Corri and Corey stated emissions from EU-BOILER5 and EU-BOILER6 are exhausted through the brick stack. I used a Nikon Forestry Pro II rangefinder, to measure the stack height for EU-BOILER5 and EU-BOILER6. The Forestry Pro measurements were 149.0 feet and 149.6 feet. According to Nikon's website, the Forestry Pro II has an accuracy of ±0.9 ft for actual distances shorter than 3,280 feet. Based on the measurements taken, the stack for EU-BOILER5 and EU-BOILER6 meets the minimum height specified in the ROP.

**FG-BOILERS**

This flexible group includes EU-BOILER3, EU-BOILER4, EU-BOILER5, and EU-BOILER6. Conditions in FG-BOILERS were established pursuant to Rule 201(1)(a). Though EU-BOILER4, EU-BOILER5 and EU-BOILER6 were installed after June 9, 1989 (based on GM employee statements and aerial photos) the current and previous versions of the ROP/Source-wide Permit to Install (PTI) indicate only EU-BOILER6 is subject to the New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60 Subpart Dc. 40 CFR Part 60 Subpart Dc applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). The only requirement in NSPS Dc for natural gas-fired boilers is to record and maintain records of the amount of each fuel combusted during each calendar month. GM-MPG keeps records of the amount of fuel combusted per calendar month for EU-BOILER4, EU-BOILER5 and EU-BOILER6.

NOx emissions from FG-BOILERS are limited to 0.14 lb/MMBtu based on a 24-hour average in FG-BOILERS SC I.1. Compliance with this emission limit is demonstrated through FG-BOILERS SC V.1, VI.2 and Appendix 7a.

FG-BOILERS SC V.1 states verification of the emission rates from FG-BOILERS may be required. I did not see any stack tests reports or AQD requests for stack testing in AQD's files for GM-MPG. Corri provided records required in FG-BOILERS SC VI.1, VI.2 and Appendix 7a (Attachment 4). GM-MPG determines compliance with the limit by comparing the heating value in Btu/scf from the natural gas bill to the minimum heat value necessary to meet the NOx limit (emission factor in Appendix 7a /NOx limit in SC V.1 = 714 Btu/scf). Based on the information provided, the heating value of the natural gas is 1050 - 1060 Btu/scf, which is greater than the minimum necessary (714 Btu/scf) to meet the limit in FG-BOILERS SC I.1. This equals a monthly average NOx emission rate between 0.094 and 0.095 lb/MMBtu.

**EU-GEN19**

I did not inspect EU-GEN19 during this inspection. During my inspection of GM-MPG on 7/13/22, I inspected EU-GEN19 and noted it is a Cummins/Ford Model ESG642 manufactured in April 2007. This generator is referred to Gen-27 in the records Corri provided. Based on the engine size and type of fuel fired, EU-GEN19 is exempt from the requirements of Rule 201 pursuant to Rules 278 and 285(2)(g) and not subject to 40 CFR 63 Subpart ZZZZ (MACT ZZZZ) or 40 CFR 60 Subpart JJJJ (NSPS JJJJ) because it is a new engine as defined in MACT ZZZZ and was manufactured before July 1, 2008.

The only requirements in the ROP for EU-GEN19 are to operate and maintain the engine in a manner to minimize emissions (SC III.1) and not operate the engine for more than 500 hours per 12-month rolling time period (SC III.2). Corri provided maintenance records and 12-month rolling hours of operation for EU-GEN19 (Attachment 5). According to these records, GM appears to be properly maintaining the engine. In addition, the highest reported 12-month rolling hours of operation for EU-GEN19 between June 2022 and June 2023 was 15.2 hours reported in the 12-month periods ending October 2022 and February 2023.

**EU-REMEDIATION**

EU-REMEDIATION consists of soil vapor extraction (SVE) wells, vacuum blower(s), and an air flow distribution system equipped with a catalytic oxidizer. Requirements in the ROP were established pursuant to Rule 201(1)(a) and 40 CFR Part 64 (CAM). I inspected EU-REMEDIATION. During the inspection, EU-REMEDIATION was not being operated. According to Brenda, EU-REMEDIATION never been operated at GM-MPG. GM-MPG has reported, in the Michigan Air Emissions Reporting System (MAERS), that this emission unit was not operated each reporting year between 2015 and 2022. In addition, Corri provided emission records for June 2022 through June 2023 (Attachment 6) indicating there has not been any emissions from EU-REMEDIATION. Compliance with the conditions in the ROP applicable to EU-REMEDIATION were not evaluated because records indicate the unit has not been operated for the past two years at least.

**EU-BURNPAD**
EU-BURNPAD is an area used for fire training and thermal testing of vehicles for litigation purposes. Requirements in the ROP were established pursuant to Rule 201(1)(a). I inspected the burn pad and noted it was an open concrete pad. I did not see anything on the pad during the inspection. There was a white vehicle body next to the burn pad that didn't have any signs it had been on fire. The roof pillars were in cut in two. According to Brenda, the car was likely used for rescue training. Corri provided records including the information required in the ROP (Attachment 7). These records indicate there have been no thermal/fire testing event on EU-BURNPAD between June 2022 and June 2023. In addition, GM-MPG reported in MAERS that EU-BURNPAD was not operated in calendar years 2017 through 2022. Compliance with the conditions in the ROP applicable to EU-BURNPAD were not evaluated because records indicate the unit has not been operated for the past two years at least.

**FG-ENGINEDYNOS – Building #94**
This flexible group applies to the ten engine dynamometers at the facility. Requirements in the ROP for FG-ENGINEDYNOS were established pursuant to Rule 201(1)(a). The dynos in FG-ENGINEDYNOS are not subject to the NESHAP for Engine Test Cells/Stands, promulgated in 40 CFR 63 Subpart PPPPP, because the dynos are not located at a major source of HAPs.

According to Brenda, the dynos in FG-ENGINEDYNOS are used for noise and vibration testing. I inspected the engine test cells in Building #94. An employee in the dyno area stated only two of the test cells are used for testing diesel engines (cell P121 [EUENGINEDYNO6] and cell P122 [EUENGINEDYNO7]). This employee showed me the diesel oxidation catalyst (DOC) on a diesel engine in EUENGINEDYNO7. The other cell used for diesel engine testing (cell P121 [EUENGINEDYNO6]) was empty during the inspection. I observed 4 cylinder gasoline-fired engines equipped with a catalytic converters in cells 112 and 114. There was a 400 V electric drive unit in cell 117. Each of the gasoline and diesel fueled engines I saw during the inspection were equipped with emissions controls.

FG-ENGINEDYNOS SC I.1 - I.6 specify short term (lb/day or lb/hour) and 12-month rolling CO, NOx, and VOC limits. FG-ENGINEDYNOS SC II.1 - II.2 specifies fuel use limit for the dynos. Corri provided records required in SC VI.1 - VI.7, to show compliance with the emission and fuel use limits, for June 2022 through June 2023 (Attachment 8). The records indicate GM is using the emission factors in Appendix 7 to calculate CO, NOx and VOC emissions. According to records, pounds per hour emissions assume three hours of operation per operating day. The CO lb/day emissions were initially calculated using the total number of days in a calendar month, not the number of days the dynos were operated in a month. I sent an email to Corri letting her know the CO lbs/day should be calculated using the number of operating days, not the number of days in a month.

On 9/21/2023, Corri sent records of the CO lbs/day based on the number of operating days for January 2023 - July 2023. Weekly fuel use and NOx and VOC lb/hour records based on weekly fuel use were not submitted initially. On 9/21/2023, Corri sent records of the Weekly fuel use and NOx and VOC lb/hour records based on weekly fuel usage. The weekly records show negative daily and weekly fuel throughput. Corri explained the reason for the negative throughput in an email dated 9/22/2023. In the email Corri stated "Chassis dyno fuel is subtracted from the Tank A&B total so that it is not included in the Noise and Vibration (N&V) dyno emission calculations. The chassis dyno use may consume more fuel than the N&V dynos on any given week therefore the N&V [noise & vibration/engine] dyno usage is less than the chassis dyno in those instances." This does not explain how the chassis dynos can use more fuel in a day/week than was taken out of the tank for that day/week, which happened on four days in the records. In an email I sent to Corri on 9/26/2023, I asked Corri why the chassis dynos reported daily fuel use was more than the amount of fuel taken out of a tank for the day. In addition, there are days when the fuel reading went up from one day to the next without any fuel being added. Corri explained, in an email dated 9/22/2023, that there are several possible reasons this could happen including: Very low usage and hundreds of feet of supply and return piping into each test cell cause tank levels to fluctuate, When the system is being used for testing, Day Tanks are filled with fuel from Tanks A&B. The Day tanks are evacuated back into Tanks & B at end of shift, Inconsistent incoming and outgoing fuel level fluctuations create incremental discrepancies, low usage causes intermittent float issues and floats have to be pulled and reset, inconsistent weekly manual tank readings – at times taken after Day Tanks were filled. (this method is no longer used) - the automatic tank gage inventory system is now

being used for more accurate data, water in the tank earlier in the year caused higher fuel level readings until it was discovered and removed.

Maximum values from records are compared to permit limits below.

| FG-ENGINEDYNOS | | | | |
|---|---|---|---|---|
| **Material/Pollutant** | **Units** | **Month/Week of Max** | **Max** | **Limit** |
| Fuel | gallons/year | August 2022 | 2,302 | 10,000 |
| Fuel | gallons/day | June 2022 | 13.2 | 350 |
| CO | tons/year | June, July, August 2022 | 3.0 | 21.4 |
| CO | lbs/day | June 2022 | 26.38[A] | 1,498 |
| NOx | tons/year | Multiple | 0.2 | 1 |
| NOx | lbs/hr (3 hr day) | June 2022/Week of 1/9/2023 | 1.39/1.1[B] | 4.4 |
| VOC | tons/year | Multiple | 0.2 | 1 |
| VOC | lbs/hr (3 hr day) | Week of 1/9/2023 | 1.0 | 4.4 |

[A]The highest CO lb/day emissions from initial submitted and using the reported number of operating days for the month.
[B]1.39 lbs/hour from initial submittal based on monthly fuel use and 3 hour operating day. 1.1 lbs/hour based on weekly fuel use and 3 hour operating day.

FG-ENGINEDYNOS SC V.1 states verification of the emission rates from FG-ENGINEDYNOS may be required. I did not see any stack tests reports or AQD requests for stack testing in AQD's files for GM-MPG.

**FG-BACKUPGENS – Building #136**
This flexible group is for four diesel-fired emergency generators and six diesel-fired rotary uninterruptible power supply (DRUPS) associated with the New Data Center. DRUPS are equipped with a flywheel that draws power from the utility to spin. Kinetic energy is generated by the flywheel. The momentum generates enough energy for "ride-through" before the diesel generator comes on, creating an uninterruptable power supply (UPS).

Requirements in the ROP for FG-BACKUPGENS were established pursuant to Rule 201(1)(a) and 40 CFR 60 Subpart IIII (NSPS for Stationary Compression Ignition Internal Combustion Engines).

I inspected each engine in FG-BACKUPGENS. The information on each engine's nameplate matches the description for the engine in the ROP.

FG-BACKUPGENS SC I.1 through I.2 limit the NOx emissions from each DRUPS to 61.56 lbs/hour and each generator to 44.10 lb/hour respectively. Compliance with these limits, according to the ROP, is demonstrated through stack testing upon AQD District Supervisor request. I did not see any stack test reports or AQD requests for stack testing in AQD's files for GM MPG.

GM MPG complies with the emissions limits in FG-BACKUPGENS SC I.3 through I.5 by purchasing certified engines and operating the engines according to the manufacturer written instructions, or procedures developed by the owner/operator and approved by the engine manufacturer, over the entire life of the engine. I saw the emission certification placard on each engine in FG-BACKUPGENS during the inspection. In addition, Corri provided a letter from the engine manufacturer stating the engine models in FG-BACKUPGENS (engine family NMDDL95.4GTZ) were certified to the requirements of Part 1039 Tier 2 standards.

The maximum sulfur content of the diesel fuel used in FG-BACKUPGENS is limited to 15 ppm (0.0015 percent) by weight in FG-BACKUPGENS SC II.1. Corri provided fuel bill of lading record required in FG-BACKUPGENS SC VI.6. This record indicates the sulfur content of the fuel used in FG-BACKUPGENS is 15 ppm (S:\Air Quality Division\STAFF\Kerry Kelly\FY 2023 Inspections\A5262).

FG-BACKUPGENS SC III.1 and III.3 prohibit GM-MPG from operating each engine in FG-BACKUPGENS for more than 500 hours per 12-month rolling time period for any purpose and 100 hours per calendar year for non-emergency purposes. Corri provided records of the monthly and 12-month rolling hours of operation for each engine in FG-BACKUPGENS (Attachment 9). The highest 12-month rolling hours of operation for an engine in FG-BACKUPGENS were 11 hours. I observed that each engine was equipped with a non-resettable hours meter to track operating hours as required in S.C. IV.1. Hour readings that I observed during this inspection (8/21/23) and the previous inspection I conducted at GM-MPG (7/13/22) are noted in the table below.

| **ROP ENGINE ID** | **FACILITY ENGINE ID** | **HOURS NOTED FROM METER 8/21/23** | **HOURS NOTED FROM METER 7/13/22** |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **EU-GENERATOR1** | **MG-1** | **117:19** | **105:59** |
| **EU-GENERATOR2** | **MG-2** | **119:00** | **106:48** |
| **EU-GENERATOR3** | **MG-3** | **99:00** | **87:45** |
| **EU-GENERATOR4** | **MG-4** | **95:00** | **83:37** |
| **EU-DRUPS1** | **DG-A1** | **130:19** | **118:20** |
| **EU-DRUPS2** | **DG-B1** | **123:00** | **113:16** |
| **EU-DRUPS3** | **DG-A2** | **73:45** | **62:00** |
| **EU-DRUPS4** | **DG-B2** | **106:00** | **Not noted** |
| **EU-DRUPS5** | **DG-A3** | **94:00** | **80:90** |
| **EU-DRUPS6** | **DG-B3** | **102:00** | **90:21** |

FG-BACKUPGENS SC III.2 specifies operating scenarios for the engines in FG-BACKUPGENS. Based on records of the operating times and engine load during operation, the engines are operating within the scenarios allowed in SC III.2.

The nameplates I observed on the engines during the inspection indicate that each DRUPS has a 3490 kW (4680 HP) rating and each emergency generator has a 2500 kW (3,353 HP) rating. The kW ratings on the nameplates do not exceed the maximum ratings specified in FG-BACKUPGENS SC IV.2.

FG-BACKUPGENS SC VIII.1-10 require exhaust gases from each engine in FG-BACKUPGENS to be discharged unobstructed vertically upwards to the ambient air through a stack with a minimum height of 29.6 feet. I used a Nikon Forestry Pro II rangefinder, to measure the stack height for EU-DRUPS5 and EU-GENERATOR3. The Forestry Pro measurements were 28.4 feet for EU-DRUPS5 and 31.6 feet for EU-GENERATOR3. According to Nikon's website, the Forestry Pro II has an accuracy of ±0.9 ft for actual distances shorter than 3,280 feet.

**FG-OLDDATACTR – Building #24**
This flexible group is for three, 3,017 HP diesel emergency generators located at the Old Data Center manufactured and constructed in 2007. Brenda and Corri stated only one generator was still installed behind Building #24. Based on information in the Michigan Air Emissions Report System (MAERS), the remaining generator is EU-GEN23. EU-GEN24 and EU-GEN25 were removed from MAERS for RY 2022. The removal/dismantle date listed in the RY 2022 MAERS report for EU-GEN24 and EU-GEN25 is 9/1/2021.

I inspected EU-GEN23, located on east side of Building #24, to verify the ROP description. The nameplate on EU-GEN23 states it is a 2425 kW generator manufactured in March 2007. In the same area as EU-GEN23, I observed two sets of metal stairs and empty spaces, north of EU-GEN23, where it appeared large equipment was previously installed. An aerial photo from Google Earth Pro dated March 2021 shows two structures identical to EU-GEN23 in the empty spaces I saw during the inspection. These two structures were gone in the Google Earth Pro aerial photo dated 5/2022. The Google Earth Pro aerial photos indicate EU-GEN24 and EU-GEN25 were removed sometime between March 2021 and May 2022.

Requirements in the ROP for FG-OLDDATACTR were established pursuant to Rule 201(1)(a). NSPS IIII requirements applicable to the engines in FG-OLDDATACTR are specified in FG-SUBPARTIIII in the ROP.

FG-OLDDATACTR SC I.1 limits the NOx emissions from each engine in the flexible group to 515 lb/1,000 gallons on an hourly basis. Compliance with this limit, according to the ROP, is demonstrated through stack testing upon AQD District Supervisor request. I did not see any stack test reports or AQD requests for stack testing in AQD's files for GM-MPG.

Corri provided monthly and 12-month rolling fuel use records for the engine at FG-OLDDATACTR from June 2022 through June of 2023 per S.C. VI.1 and 4 (Attachment 10). These records show only diesel fuel is used in the engine at FG-OLDDATACTR as specified in S.C. II.1 and show EU-GEN24 and EU-GEN25 were permanently disconnected March 2021. The maximum diesel fuel used per 12-month rolling time period was 4,455 gallons, reported for the period ending June 2023, which is below the limit of 136,000 gallons in S.C. II.3.

GM-MPG is required to operate the engines in FG-OLDDATACTR in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction. Corri provided records of the maintenance performed on the engines in FG-OLDDATACTR (S:\Air Quality Division\STAFF\Kerry Kelly\FY 2023 Inspections\A5262). GM reported, in the semi-annual report received on 9/15/2023, that they failed to perform maintenance on EU-GEN23 on time according to manufacturer's schedule . The report states EU-GEN23 maintenance was performed on 6/19/2023. Since the deviation was addressed, a VN will not be sent.

**FG-GASTANKS**

This flexible group applies to any new (placed into operation on or after 7/1/79) or modified gasoline storage tank of capacity greater than 2000 gallons that is exempt from the requirements of Rule 201 pursuant to Rule 278 and Rule 284 (2)(g). Rule 284(2)(g) exempts dispensing facilities for storage, mixing, blending and handling of gasoline and/or gasoline/ethanol blends, for natural gas storage and handling, or for diesel fuel storage and handling from Rule 201 requirements. A dispensing facility, according to Rule 104(g), means a location where gasoline is transferred to a motor vehicle tank from a stationary vessel. During the inspection, I saw one of the underground gasoline storage tanks which was near/under gasoline fuel pumps used to dispense gasoline into motor vehicles.

Requirements in the ROP for FG-GASTANKS were established pursuant to Rule 703 and the NESHAP for Gasoline Dispensing Facilities (40 CFR Part 63, Subpart CCCCCC). EGLE-AQD has not accepted delegation to implement and enforce NESHAP Subpart CCCCCC. Compliance with NESHAP CCCCCC was not evaluated as a result. On August 11, 2022, GM-MPG submitted results of Performance Testing for Gasoline Dispensing Facilities (GDP) NESHAP as required by 40 CFR Part 63, Subpart CCCCCC (Sections 63.11110 - 63.11132) and 40 CFR Part 63, Subpart A (section 63.9).

Rule 703 includes procedures for loading of gasoline and requirements for tank design. I did not see any gasoline tanks being loaded during the inspection. Corri provided records, required in FG-GASTANKS SC VI.1, of the tank names, locations, capacities, installation dates, material contained, gasoline throughput, and whether each tank is equipped with a submerged fill pipe and vapor balance system (Attachment 11). These records indicate that all tanks are equipped with a submerged fill pipe and all but one (Tank A-125, located at Building #94) have a vapor recovery system. According to the records, Tank A-125 is a 4,000 gallon tank with 2, 2,000 gallon compartments and, therefore, not required to have an vapor recovery system referenced in Rule 703(2) and (3). Rule 703(2) and (3) apply to vessels greater than 2,000 gallons.

**FG-RULE287(2)(c)**

This flexible group is for paint booths exempt from obtaining a PTI per Rule 287(2)(c). According to the ROP, the paint booths are located in Building #'s 11, 25, and 70. Requirements in the ROP for FG-RULE287(2)(c) were established pursuant to Rule 287(2)(c) and Rule 213(3).

We visited the coating booths in Building #70. There are four paint booths at this location (P1,P2, T1, and T2). I did not see any painting being done during the inspection. I inspected the filters in booth P2 and noted the filters appeared to be installed properly as required in S.C. IV.1. Corri provided records of the filter replacements/paint booth maintenance as required in SC VI.1.b (Attachment 12). There are faults if the booths' pressure is out of balance. According to an employee in the paint area, Dan, only HVLP paint guns are used.

Each paint booth included in FG-RULE287(2)(c) of the ROP is limited to 200 gallons of coating use per month in SC I.1. Corri provided coating usage records for the coating booths at GM-MPG for June 2022 to June 2023 (Attachment 13) as required in SC VI.1.a. In addition, Corri provided monthly lbs of each HAP containing material used, including reducers and thinners. The HAP material usage records include materials used in other processes as well and, as a result, I could not easily compare the information in the two sets of records to determine whether the thinner and reducer usage was included in the gallons of coating use records. The coating use records indicate the highest monthly usage for all Rule 287 (2)(c) booths combined was 35.75 gallons reported in May 2023, which is about 18% of the limit for one coating booth. Even if the highest reported coating usage was doubled to account for thinner and reducer, the monthly usage in gallons for all booths combined would still be less than the limit for one coating booth.

There are also two paint mix rooms adjacent to the paint booths in building #70; one for water-based coatings and the other for solvent-based clear coating.

There are also two BECCA paint gun cleaners, one solvent-based and the other water-based. The BECCA works by connecting the paint gun to a hose on the BECCA. A pneumatic pump pulls cleaning solution from a container below the basin through the hose and gun. Spent cleaning solution drains through an approximately 1 inch hole in the bottom of the cleaner basin, is filtered to remove solids, then stored in the cleaning solution container for re-use.
Labels on the Model 9880 indicate the solvent used is Safety Kleen Premium Solvent Blend and the capacity is 5 gallons. Labels on the Model 700 indicate the cleaner used is PPG SWX100. The SDS for the Safety Kleen Premium Solvent indicates in contains 100% petroleum distillates, hydrotreated light. The SDS for the PPG SWX100 cleaner indicates it is a waterborne cleaner containing </= 5% cyclohexanone with no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in Section 3 of the SDS. Requirements applicable to the BECCA Model 9880 are covered in the FG-COLDCLEANERS table in the ROP. Based on the information from the SDS, the BECCA Model 700 is exempt from the requirements in Rule 201 to have a PTI per Rule 278(2)(k) because it is a tank containing liquid with a volatile organic compound content of less than 5 %, by weight, and at a temperature below its boiling point that is used to spray, brush, flush, or immerse metallic and/or plastic objects for the purpose of cleaning or degreasing.

Brenda provided a photo of the paint booth in Building #25 (EU-PAINTBOOTH2 in the ROP) via email on 8/23/23.
The paint booth, according to Brenda, is located on the west end of the Building #25. The filters for EU-PAINTBOOTH2 are clearly visible in the photo Brenda sent. Based on the photo, the filters appear to be properly installed with no gaps.

**FG-MACT6H**
This flexible group contains requirements from the NESHAP for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (40 CFR Part 63, Subpart HHHHHH). According to the ROP, the paint booths located in Building #'s 11, 25, and 70 are subject to 40 CFR Part 63, Subpart HHHHHH. EGLE-AQD has not accepted delegation to implement and enforce NESHAP Subpart HHHHHH. Compliance with NESHAP HHHHHH was not evaluated as a result.

**FG-RULE290**
This flexible group is for equipment exempt from obtaining a PTI per Rule 290(2). According to the ROP, processes exempt per Rule 290(2) are the steam cleaning of gasoline fuel tanks (EU-TANKPURGE) and the deployment of obsolete air bags ((EU-AIRBAGS) . Requirements in the ROP for FG-RULE290 were established pursuant to Rule 290 and Rule 213(3).
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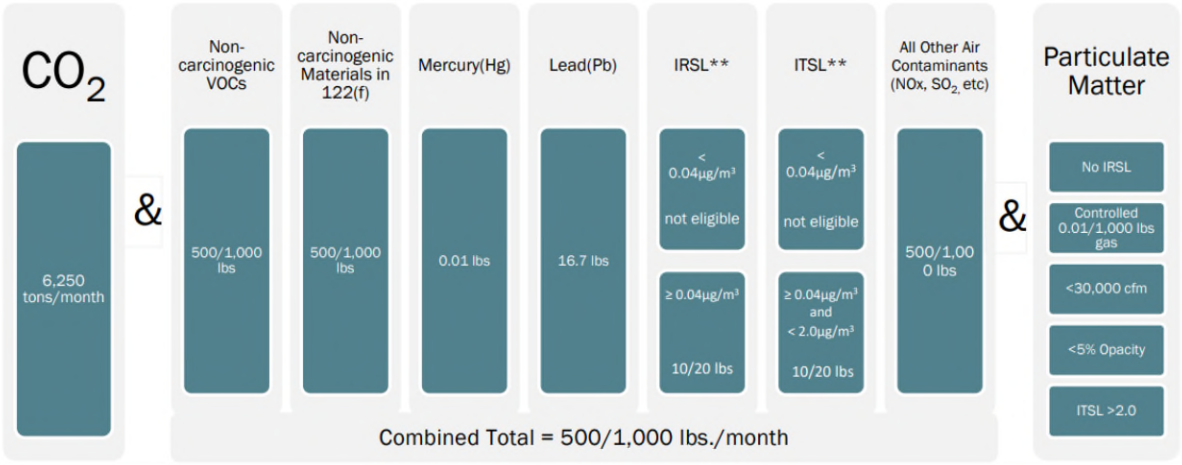
Corri provided records of emissions from EU-TANKPURGE and EU-AIRBAGS for June 2022 through June 2023, as required in S.C. VI.1 (Attachment 14 and S:\Air Quality Division\STAFF\Kerry Kelly\FY 2023 Inspections\A5262). FG-RULE290 SC I.2.c prohibits the emissions of toxic air contaminants with an initial threshold screening level (ITSL) or initial risk screening level (IRSL) less than 0.04 microgram per cubic meter. The records provided indicate EU-TANKPURGE and EU-AIRBAGS do not emit any toxic air contaminants with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. The contaminate with the lowest ITSL/IRSL in the records provided is formaldehyde with an IRSL of 0.08 micrograms/cubic meter.

Limits set forth in Rule 290 (FG-RULE290 SC I.1-3) are displayed in the table below:




The records provided indicate EU-TANKPURGE and EU-AIRBAGS do not emit mercury or lead. The highest monthly VOC emissions from EU-TANKPURGE were 2.463 lbs (June 2022) with combined benzene and ethylbenzene (IRSL = 0.1 and 0.4 micrograms/meter cubed respectively) emissions of 0.062 lbs. The highest recorded monthly emissions of all pollutants from EU-AIRBAGS was 0.2321 lbs in December 2022 with combined carcinogenic pollutant emissions (benzene and formaldehyde) of 0.0113 lbs.

During the inspection, I inspected the fluid removal process and tank purge area in Building #12. I did not see any tanks being purged during the inspection. The tank purge stations have flexible ducting directed to stacks that vent to the ambient air. The waste containers I observed were covered during the inspection.

In building #73, I inspected a SEDA air bag neutralization cabinet. An employee in the area explained how the SEDA cabinet works. According to this employee, multiple small air bags can be neutralized at one time. Larger bags are done one at a time. The air bags are removed from vehicles, the airbag is connected to leads inside the cabinet, the cabinet door is closed, and the machine is turned on to deploy the air bags. Brenda stated emissions from the SEDA are uncontrolled.

**FG-COLDCLEANERS**

This flexible group applies to any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979. Rule 281(2)(h) exempts cold cleaners with an air/vapor interface not more than 10 square feet.

Requirements in the ROP for FG-COLDCLEANERS were established pursuant to Rule 707 and Rule 213(3). Rule 707 requires covers to be installed and the cover to be closed whenever parts are being handled in the cleaner, a device for draining parts be installed, instructions to be posted near the cleaner, and waste to be stored in closed containers.

GM-MPG provided a list of all cold cleaners and their locations throughout the facility per S.C. VI.2 (S:\Air Quality Division\STAFF\Kerry Kelly\FY 2023 Inspections\A5262). These records indicate there are 24 cold cleaners at GM-MPG. The records indicate there are no halogenated solvents used in the cold cleaners as prohibited in FG-COLDCLEANERS SC I.1. All cold cleaners, according to the records and my observations, have an air/vapor interface less than 10 square feet, as required in FG-COLDCLEANERS SC IV.1 I inspected one cold cleaner in Building #31 and Building #94 and two cold cleaners located in Building #70 (one in the paint area and one in the vehicle maintenance area). The cleaners were not being used during the inspection.

I observed that the BECCA gun cleaner/recycling system, located in the paint area, has a opening approximately 1.5 feet x 2 feet (3 square feet). The cold cleaners in Building #31 and Building #94 each had an air/vapor interface of approximately 8 square feet. One parts washer in the maintenance area had a solvent/air interface of about 6 square feet and the other about 8 square feet. There was Safety Kleen Premium label on the 8 square feet cold cleaners. During the inspection I observed instructions were posted on each cold cleaner, as required in FG-COLDCLEANERS SC VI.3. The lid on each cold cleaner I inspected was closed, as required in FG-COLDCLEANERS SC IV.3. I saw that the BECCA gun cleaner has a device for draining parts as required in FG-COLDCLEANERS SC IV.2. All waste containers I observed during the inspection were closed.

**FG-RICEMACT**

This flexible group contains requirements from the NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE), located at an area source of HAP emissions (40 CFR Part 63, Subpart ZZZZ). According to the ROP, EU-GEN1, EU-GEN2, EU-GEN3, EU-GEN4, EU-GEN6, EU-GEN7, EU-GEN8, EU-GEN9, EU-GEN10, EU-GEN11, EU-GEN12, EU-GEN21, EU-GEN22 are subject to 40 CFR Part 63, Subpart ZZZZ and each engine is an existing emergency RICE. Based on the descriptions for each engine in FG-RICEMACT, each engine is exempt from the requirements of Rule 201 pursuant to Rules 278 and 285(2)(g). Rule 285(2)(g) exempts internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input from the requirement to have a PTI. AQD received notification on 9/29/2022 that Milford Proving Ground is removing diesel fired EU-GEN8 and installing a new natural gas and propane fueled generator (EU-GEN8a). EU-GEN8a is exempt per Rule 285(2)(g) and subject to NSPS JJJJ according to the notification.

EGLE-AQD has not accepted delegation to implement and enforce NESHAP Subpart ZZZZ for area sources of HAP. Compliance with all requirements in NESHAP ZZZZ was not evaluated as a result. Corri provided records of the hours of operation of each engine in FG-RICEMACT (S:\Air Quality Division\STAFF\Kerry Kelly\FY 2023 Inspections\A5262). A cursory review of these records indicate each engine was operated for less than 100 hours for non-emergency purposes in calendar year 2022.

I inspected one emission unit in FG-RICEMACT (EU-GEN6). EU-GEN6 is located outside of Building #9. The nameplate for EU-GEN6 indicates it is a 1109 HP, diesel-fired, Caterpillar engine. I observed an hours meter on EU-GEN6 and a diesel fuel tank near the generator. The hours meter read 1406 hours during the inspection. EU-GEN6 is identified in the records provided as Gen-10. Records indicate the generator has a rating of 750 kW. The ROP states the engine is 1006 HP. According to an email from GM dated 9/12/2022; using the rated horsepower on the nameplate (1109 HP) and 7,000 btu/hp*hr, the calculation is 7,763,000 btu/hr. (The 7,000 btu/hp*hr was taken from AP-42 Table 3-3.1 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines, footnote a). Based on this information, EU-GEN6 meets the PTI exemption in Rule 285(2)(g).

**FG-SUBPARTIIII & FG-SUBPARTJJJJ**
The ROP lists four engines (EU-GEN18, EU-GEN23, EU-GEN24, EU-GEN25) in FG-SUBPARTIIII and five engines (EU-GEN14a, EU-GEN15a, EU-GEN20, EU-GEN30, EU-GEN31) in FG-SUBPARTJJJJ. EU-GEN24, EU-GEN25 were removed in September 2021. See FG-OLDDATACTR discussion for more details. AQD received notification on 9/29/2022 that Milford Proving Ground is installing a new natural gas and propane fueled generator (EU-GEN8a). EU-GEN8a is exempt per Rule 285(2)(g) and subject to NSPS JJJJ according to the notification

Requirements in the ROP for FG-SUBPARTIIII & FG-SUBPARTJJJJ were established pursuant to 40 CFR Part 60, Subparts IIII (NSPS for Stationary Compression Ignition Internal Combustion Engines) and JJJJ (NSPS for Stationary Spark Ignition Internal Combustion Engines.

I inspected one emission unit in FG-SUBPARTIIII (EU-GEN23) located at Building #24. See FG-OLDDATACTR discussion for more details.

Compliance with the emission limits in FG-SUBPARTIIII & FG-SUBPARTJJJJ is demonstrated either through the purchase of an engine certified by the manufacturer to meet the limits or through testing at the owner's expense. The engines in FG-SUBPARTIIII & FG-SUBPARTJJJJ are certified engines. Corri provided a copy of the EPA Certificate of Conformity for each engine in FG-SUBPARTIIII & FG-SUBPARTJJJJ, required in FG-SUBPARTIIII SC VI.2 & FG-SUBPARTJJJJ VI.3 (Attachment 16). These records indicate that each engine meets the applicable emission limits in 40 CFR Part 60, Subparts IIII and JJJJ.

FG-SUBPARTIIII SC III.1, 2, and 4 & FG-SUBPARTJJJJ SC III.1 and 2 require GM to operate and maintain each engine in FG-SUBPARTIIII & FG-SUBPARTJJJJ according to the manufacturer's emissions related instructions. Corri provided manufacturer's instructions and maintenance records required in FG-SUBPARTIIII S.C. VI.4 and FG-SUBPARTJJJJ VI.2 (S:\Air Quality Division\STAFF\Kerry Kelly\FY 2023 Inspections\A5262).

FG-SUBPARTIIII SC III.6 and FG-SUBPARTJJJJ III.3 limit the total hours of operation of each engine to 500 hours per 12-month rolling time period. FG-SUBPARTIIII SC III.7 and FG-SUBPARTJJJJ III.4 limit the hours of operation for maintenance, testing, and non-emergency situations for each engine to 100 hours per calendar year. Corri provided the hours of operation of each engine as required in FG-SUBPARTIIII & FG-SUBPARTJJJJ SC VI.6 (Attachment 17 and Attachment 5) for June 2022 through June 2023. These records indicate the engine in FG-SUBPARTIIII and FG-SUBPARTJJJJ with the highest 12-month rolling hours of operation was EU-GEN14a (Gen-22 in records) with 54.52 hours reported in the periods ending October 2022. EU-GEN14a was operated for 15.42 hours between June 2022 and October 2022 for emergency purposes according to the records. All other engines in FG-SUBPARTIIII and FG-SUBPARTJJJJ were operated for less than 36 hours per 12-month rolling time period according to the records provided.

**PTI No. 130-22**
FGDRUPS7&8
This flexible group is for two diesel-fired rotary uninterruptible power supply (DRUPS) associated with the New Data Center. DRUPS are equipped with a flywheel that draws power from the utility to spin. Kinetic energy is generated by the flywheel. The momentum generates enough energy for "ride-through" before the diesel generator comes on, creating an uninterruptable power supply (UPS).

Requirements for FGDRUPS7&8 were established pursuant to Rule 201(1)(a) and 40 CFR 60 Subpart IIII (NSPS for Stationary Compression Ignition Internal Combustion Engines).

I inspected each engine in FGDRUPS7&8. The information on each engine's nameplate matches the description for the engine in the PTI.

FGDRUPS7&8 SC I.1 through I.3 limit the NMHC+NOx, CO, and PM emissions from each DRUPS to 6.4g/kW-hr, 3.5 g/kW-hr, and 0.20 g/kW-hr respectively. GM-MPG complies with the emissions limits in FGDRUPS7&8 SC I.1 through I.3 by purchasing certified engines and operating the engines according to the manufacturer written instructions, or procedures developed by the owner/operator and approved by the engine manufacturer, over the entire life of the engine. I saw the emission certification placard on each engine in FGDRUPS7&8 during the inspection. In addition, Corri provided a letter, required in SC VI.2, from the engine manufacturer stating the engine models in FGDRUPS7&8 (engine family NMDDL95.4GTZ) were certified to the requirements of 40 CFR Part 60.

The maximum sulfur content of the diesel fuel used in FGDRUPS7&8 is limited to 15 ppm (0.0015 percent) by weight in FGDRUPS7&8 SC II.1. Corri provided fuel bill of lading record required in FGDRUPS7&8 SC VI.6 (S:\Air Quality Division\STAFF\Kerry Kelly\FY 2023 Inspections\A5262. This record indicates the sulfur content of the fuel used in FGDRUPS7&8 is 15 ppm.

FGDRUPS7&8 SC III.1 and III.2 prohibit GM-MPG from operating each engine in FGDRUPS7&8 for more than 18 hours per day and 177 hours per 12-month rolling time period, except during emergency conditions, and 100 hours per calendar year for non-emergency purposes. I observed that each engine was equipped with a non-resettable hours meter to track operating hours as required in S.C. IV.1. Hour readings that I observed during this inspection (8/21/23) are noted in the table below. Corri provided records of the hours of operation for EU-DRUPS7 and EU-DRUPS8 (Attachment 9). According to these records, EU-DRUPS7 has 11.5 hours and EU-DRUPS8 had 11.2 hours on the hours meter when receieved from the manufacturer.

| ROP ENGINE ID | FACILITY ENGINE ID | HOURS NOTED FROM METER |
|---|---|---|
| EU-DRUPS7 | DG-A4 | 21 |
| EU-DRUPS8 | DG-B4 | Not noted |

The nameplates I observed EUDRUPS7 and EUDRUPS8 during the inspection indicate that each DRUPS has a 3490 kW (4680 HP) rating. The kW ratings on the nameplates do not exceed the maximum ratings specified in FGDRUPS7&8 SC IV.2.

FGDRUPS7&8 SC VIII.1-2 require exhaust gases from each engine in FG-BACKUPGENS to be discharged unobstructed vertically upwards to the ambient air through a stack with a minimum height of 36 feet. I used a Nikon Forestry Pro II rangefinder, to measure the stack height for EUEUDRUPS7 and EUDRUPS8. The Forestry Pro measurements were 36.1 feet for EU-DRUPS7 and 36.6 feet for EUDRUPS8. According to Nikon's website, the Forestry Pro II has an accuracy of ±0.9 ft for actual distances shorter than 3,280 feet.

**OTHER EQUIPMENT**
CHASSIS DYNOS
A chassis dynamometer is a mechanical device that uses one or more fixed roller assemblies to simulate different road conditions within a controlled environment and is used for a wide variety of vehicle testing and development purposes.

On June 12, 2013, the Michigan Department of Environmental Quality (MDEQ) Chief at the time, Vince Hellwig, sent an email to MDEQ supervisors and administrators that states, in part, "Recently, EPA did determine that the GM Orion chassis roll tests for the finished vehicles are mobile sources. EPA's Hyundai letter did not address chassis roll test at

vehicle assembly plants, nor did it speak to chassis dynos at facilities other than Hyundai's Michigan facility." The email also states, "Due to lack of national consistency on this issue, no clear guidance from EPA and that neighboring states consider chassis dynos mobile sources, and AQD has determined that motor vehicle test operations including chassis dynos are subject solely to Title II of the CAA and are not stationary sources." and "Thus, absent a voluntary request from a company to include such operations in a stationary source permit, AQD will not include such activities in a PTI or ROP". AQD is still following the policy set for in the June 12, 2013 email from Vince Hellwig at this time. As a result, I did not evaluate stationary source applicability of the chassis dynos at GM-MPG and relied on EPA to determine/enforce mobile source requirements for the vehicles tested on the chassis dynos at the facility.

While driving through GM-MPG, I saw a building with a sign that said Vehicle Emissions on Building 31. I asked Corri and Brenda to see inside the building.

During my inspection on July 13, 2022, I saw several booths large enough to drive a car into in Building 31. I did not count the number of booths I observed. I did see a board on the wall near the booths that had labels "Towers 1 - 14". The AQD inspection report for GM-MPG, dated August 24, 2009, states there were 13 test cells in Building #31. While inside the Building #31 during my inspection on August 21, 2023, I observed a sticker on the underside of the hood of one of the vehicles in Building #31. The sticker read, in part, "This vehicle and engine is exempt from the prohibitions of Section 203 (A)(1), (3), and (4) of the Clean Air Act, as amended, and from California requirements where applicable. When affixed this label supersedes any other certification label." Section 203(A)(1), (3), and (4) of the Clean Air Act apply to mobile sources and are enforced by the EPA.

While inspecting FG-ENGINEDYNOS in Building #94 on July 13, 2023, I observed 10 chassis dynamometers. I was told at the time that the chassis dynos in Building #94 are used for pre-production vehicle development including fuel economy and noise and vibration testing.

ENGINE CARTS
It is noted in the July 12, 2017 AQD inspection report, that there are six “engine carts” located in building #42G used for warranty testing on older engines. According to the 7/12/2017 report, the engines were equipped with Tier II controls, i.e. catalytic converters similar to road vehicles, but they are not equipped with wheels or a vehicle frame. The AQD staff member who inspected the facility on 7/12/2017, Sam Liveson, indicated the engines appeared to be exempt from obtaining a Permit to Install per Rule 285(2)(g).

I did not go to Building #42 during the 8/21/2023 inspection. Following my inspection on 7/13/2022, I asked Kenneth Fryer, GM, about the engine carts. Ken sent an email response on 9/9/2022 stating the engine cart operations ended in February of 2019. Ken also attached an email from Randy Rinnas, Lab Manager, Fuels, Chemistry, Dyno, and Metallurgy Labs, Milford Proving Grounds to four recipients with gm.com email addresses. Randy's email is dated 02/20/2019 and it states "effective Feb 28th the garage and dyno operations at 42A & 42G will be shut down."

In addition, in each MAERS report for reporting years 2019, 2020, and 2021, GM-MPG marked that the the "Fuel engine carts" "Did Not Operate This Year". The engine carts (EU-R285-ENGINE) were removed from MAERS for RY 2022. The removal/dismantle date listed in the RY 2022 MAERS report for the engine carts is 2/28/2019.

R&D COMPONENT TEST OPERATIONS
While driving through GM-MPG during the inspection on 8/21/23, I noticed 4 stacks on the northeast corner of Building #25. I told Brenda and Corri I'd like to go inside of Building #25 to see if we could determine what processes the stacks are for. Entering the northeast entrance of Building #25, I only observed offices and conference rooms in the northeast corner of the building. After the inspection, Brenda sent an email on 8/23/23 stating that the roof stacks on Building #25 are connected to room ventilation for a small R&D Component Test Operations Lab (specifically airbags) located on the Building #25 mezzanine. Brenda also stated in the email that the R&D Component Test Operations Lab is exempt from permit to install under Rule 283(2)(b) - Laboratory Equipment. According to information in Brenda's email, the Vehicle Safety Crash Lab (VSCL) team deploys ~3-4 airbags/day in vehicle “bucks” (vehicle shells; not fully contented) to validate airbag functionality in situations where vehicle passenger(s) are in unpredictable positions (e.g. child standing in drivers seat, person laying down, etc.). The propellants consist of various reactions that expel nitrogen gas, carbon and water; seat airbags expel compressed helium or argon/helium mixtures.

**SEMI-ANNUAL AND ANNUAL REPORTING**
The following requirements are applicable to each emission unit and flexible group in the ROP:

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A.
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A.

Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A.
The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30.
Certified semi-annual and annual deviation reports were received by AQD on September 15, 2022, March 13, 2023, and September 15, 2023. Report received on 9/15/2023 includes two deviations; not keeping weekly dyno fuel use and lb/hour NOx and VOC records between January 2022 and June 2023 and failing to perform maintenance on EU-GEN23 on time according to the manufacturer's schedule . Weekly dyno fuel use records were sent via email on 9/22/2023 and indicate compliance with limits. EU-GEN23 maintenance was performed on 6/19/2023 according to the report received. Deviations addressed and, as a result, a VN will not be sent.

**MICHIGAN AIR EMISSIONS REPORTING SYSTEM (MAERS) REPORTING**
The 2022 criteria pollutant emissions and throughput from emissions sources at GM-MPG were submitted to MAERS on time. The Source-wide natural gas usage reported to MAERS for RY 2022 was about 8 billion cubic feet higher than the 12-month rolling noted in the records provided for this inspection for the period ending December 2022. CO emission from FG-ENGINEDYNOS and NOx emissions from EU-BOILER5 and EU-BOILER6 reported to MAERS for RY 2022 were the same as NOx emissions noted in the records provided for this inspection for the period ending December 2022.

**CONCLUSION**
Based on the information gathered for this inspection, GM-MPG is in compliance with the conditions of MI-ROP-A5262-2021, PTI 130-22, and all other applicable requirements evaluated.

NAME K. Kelly DATE 10/2/2022 SUPERVISOR Joyce